

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
16 June 2005 (16.06.2005)

PCT

(10) International Publication Number  
**WO 2005/055400 A1**

(51) International Patent Classification: H02K 29/00, (74) Agent: WRAY & ASSOCIATES, Level 4, The Quadrant,  
H02P 6/00 I William Street, Perth, Western Australia 6000 (AU).

(21) International Application Number:  
**PCT/AU2004/001643**

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AB, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 3 December 2004 (03.12.2004)

(25) Filing Language: English

(26) Publication Language: English

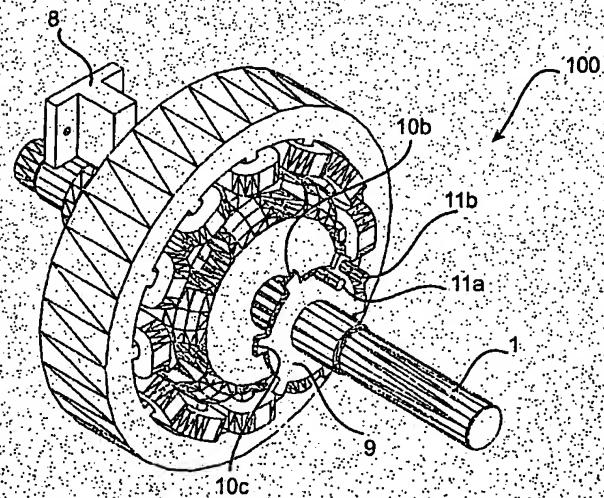
(30) Priority Data:  
2003906717 5 December 2003 (05.12.2003) AU

(71) Applicant (for all designated States except US): PRE-CURSOR ENGINEERING PTY LTD [AU/AU], 48 Buckin Street, Collie, Western Australia 6225 (AU).  
(72) Inventor; and  
(75) Inventor/Applicant (for US only): EARNSHAW, Dennis Charles [AU/AU], 48 Buckin Street, Collie, Western Australia 6225 (AU)

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, BE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CR, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: SWITCHED DC ELECTRICAL MACHINE



(57) Abstract: A switched DC rotating electrical machine (100) comprising a stator (3), a rotor (2) and switching means (11a, 11b, 18a, 18b), an excitation winding (5) associated with one of the stator (3) or the rotor (2) having a pair of inputs, the excitation winding (5) being adapted to cause magnetization of a plurality of magnetic poles (4a - 4l), the switching means (11a, 11b, 18a, 18b) being adapted to be associated with a DC voltage source (19) to switch the output thereof to the first and a second input of the excitation winding (5), the DC voltage source (19) providing a low voltage output (-V), an intermediate voltage output (0V) and a high voltage output (+V), wherein in use the intermediate voltage output is continuously connected to the first input of said excitation winding (5) and the second input is switched in a cyclic operation by the switching means between connection with the high voltage output (+V) and the low voltage output (-V).

WO 2005/055400 A1

BEST AVAILABLE COPY



**Published:**

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations," appearing at the beginning of each regular issue of the PCT Gazette.*